STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

Mark Riposta dba
Maine Coast Crematory
Waldo County
Searsport, Maine
A-1007-71-B-A

Departmental
Findings of Fact and Order
Air Emission License
Amendment #1

After review of the air emission license amendment application, staff investigation reports, and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Mark Riposta doing business as Maine Coast Crematory (Maine Coast) was issued an air emission license, A-1007-71-A-N on February 13, 2009, permitting the operation of a Class IV-A crematory.

2. Maine Coast has applied to for an amendment to the Air Emission License, to add a second crematory incinerator.

3. The equipment addressed in this license is located at 3 Spring Street, Searsport, Maine.

B. Emission Equipment

The incinerator is a B & L Cremation Systems, Inc, Model N-20, designated Crematory Incinerator #2, which is identical to the currently licensed Crematory Incinerator #1, with the following specifications:

Class Incinerator	IV-A
No. of Chambers	2
Type of Waste	Type 4
Max. Design Combustion Rate (lb/hr)	150
Auxiliary Fuel Input: **Primary Chamber (MMBtu/hr)** **Secondary Chamber (MMBtu/hr)**	Propane 0.5 1.0
Emission Control	Afterburner

The incinerator combustion gases vent to a 20 foot AGL (Above Ground Level) stack.

C. Application Classification

The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the "Significant Emission Levels" as defined in the Department's regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

Pollutant	Current License (TPY)	Future License (TPY)	Net Change (TPY)	Sig. Level
PM	3.17	6.34	3.17	100
PM_{10}	3.17	6.34	3.17	100
SO_2	0.71	1.42	0.71	100
NO_x	2.08	4.16	2.08	100
CO	1.49	2.98	1.49	100
VOC	0.17	0.34	0.17	50

This modification is determined to be a minor modification and has been processed as such.

II. BEST PRACTICAL TREATMENT

A. Introduction

In order to receive a license, the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in 06-096 CMR 100.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Crematory Incinerator #2

BACT for Incinerator #2 is the following:

- Emission Limits

  Emissions information is based on a licensed allowed particulate matter emission limit of 0.12 gr/dscf corrected to 12% CO_2, the burning of propane as an auxiliary fuel, and the use of AP-42 factors: Table 2.3-1 and 2 for medical waste incinerators (dated 7/93) and Table 1.5-1 for the specific auxiliary fuel burning (dated 7/08):

  PM - 0.72 lb/hr based on 0.12 gr/dscf corrected to 12% CO_2, BACT, and 0.2 lb/1000 gallons fuel factor.
  SO_2 – 0.16 lb/hr based on the AP-42 factors of 2.17 lb/ton.
  NO_X – 0.47 lb/hr based on the AP-42 factors of 3.56 lb/ton and 13 lb/1000 gallons fuel factor
  CO – 0.34 lb/hr based on the AP-42 factors of 2.95 lb/ton and 7.5 lb/1000 gallons fuel factor
  VOC – 0.04 lb/hr based on the AP-42 factors of 0.299 lb/ton and 1.0 lb/1000 gallons fuel factor
  Opacity: Visible emissions from the incinerator stack shall not exceed 10% opacity based on a six (6) minute block average basis.

- Operating parameters:

  - Operating temperature in the secondary chamber shall be maintained at or above 1600°F for the duration of the burn cycle, with a stack gas retention time, at or above 1600°F, of at least 1.0 second.
  - To ensure an efficient burn, and to prevent odors and visible emissions, the secondary chamber will be preheated, as specified by the manufacturer, until the pyrometer temperature measures at least 1600°F.
  - Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerator shall be operated in an efficient manner, and as specified by the manufacturer, for the period of time between preheat and reaching the set operational temperature to be a minimum of 1600°F in the secondary chamber.
  - A pyrometer and 1/4 inch test port shall be installed and maintained at that location of the incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at a minimum of 1600°F.

- A log will be maintained recording the weight of the charge, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart.
- The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1007-71-B-A subject to the conditions found in Air Emission License A-1007-71-A-N, and in the following conditions:

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

The following shall replace Specific Condition (16), in Air Emission License A-1007-A-N:

(16) **Crematory Incinerators #1 and #2**

A. The crematory incinerators shall be used for the disposal of type 4 waste and shall not be used for the disposal of plastics, cytotoxic (antineoplastic) drugs or any radioactive wastes and shall not be used to dispose of any medical waste classified as type 7 waste, as defined in 06-096 CMR 100. [06-096 CMR 115, BPT/BACT]

B. Each crematory incinerator shall not exceed its maximum design combustion rates. Auxiliary fuel inputs to the primary and secondary chambers shall be propane. Compliance shall be demonstrated through fuel receipts. [06-096 CMR 115, BPT/BACT]

C. Crematory incinerator #1 and #2 shall each not exceed a particulate matter emission limit of 0.12 gr/dscf corrected to 12% CO_2. Licensed allowed emissions for the incinerators shall not exceed the following:

Incinerator Emission Limits lb/hr
(per incinerator)

	Crem. # 1	Crem. # 2
PM	0.72	0.72
PM_{10}	0.72	0.72
SO_2	0.16	0.16
NOx	0.47	0.47
CO	0.34	0.34
VOC	0.04	0.04

Compliance shall be demonstrated through stack testing by request of the Department, in accordance with the appropriate method found in 40 CFR Part 60, Appendix A.
[06-096 CMR 115, BPT/BACT]

D. Visible emissions from the stack of each crematory incinerator shall not exceed 10% on a 6-minute block average basis. [06-096 CMR 115, BPT/BACT]

E. Operating temperature in the secondary chamber shall be maintained at or above 1600°F, with a stack gas retention time, at or above 1600°F, of at least 1.0 second. [06-096 CMR 115, BPT/BACT]

F. To insure an efficient burn, and to prevent odors and visible emissions, the secondary chamber will be preheated, as specified by the manufacturer, until the pyrometer temperature measures at least 1600°F. [06-096 CMR 115, BPT/BACT]

G. Once the burn cycle has commenced by introduction of primary chamber combustion, the incinerators shall be operated in an efficient manner, and as specified by the manufacturer, for the period of time between preheat and reaching the set operational temperature to be a minimum of 1600^0F in the secondary chamber. The temperature in the secondary chamber shall be maintained at a minimum of 1600°F for the duration of the burn cycle. [06-096 CMR 115, BPT/BACT]

H. A pyrometer and 1/4 inch test port shall be installed and maintained at that location of each incinerator or refractory lined stack which provides sufficient volume to insure a flue gas retention time of not less than 1.0 second at a minimum of 1600°F. [06-096 CMR 115, BPT/BACT]

I. A log will be maintained for each incinerator recording the weight of the charge, preheat time, charging time and the temperature of the secondary chamber every 60 minutes after start-up until, and including, final shutdown time. For facilities operating a chart recorder, the start time, date, and weight charged shall be logged on the chart. [06-096 CMR 115, BPT/BACT]

J. The incinerator operator(s) shall receive adequate training to operate the incinerator in accordance with the manufacturer's specifications and shall be familiar with the terms of the Air Emission License. [06-096 CMR 115, BPT/BACT]

DONE AND DATED IN AUGUSTA, MAINE THIS 16th DAY OF November , 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brooks Jr.
DAVID P. LITTELL, COMMISSIONER

The term of this amendment shall be concurrent with the term of Air Emission License A-1007-71-A-N.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 07/29/2009
Date of application acceptance: 08/05/2009

Date filed with the Board of Environmental Protection: _____

This Order prepared by N. Lynn Cornfield, Bureau of Air Quality.